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Institutional Change and Economic Growth in Pakistan

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Title: Institutional Change and Economic Development in Pakistan

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Abstract

This study attempts to isolate causes of institutional change and investigates the role it plays in achieving economic development. Institutional change is vital for sustainable economic growth but literature shows that related empirical evidence is limited. In this paper Multiple Indicators and Multiple Causes Model is employed. The results reveal that in case of Pakistan control of corruption, rule of law, privatization, liberalization, and voice accountability are the most important causes of institutional change. In addition to this export orientation also have a positive effect on institutional change whereas macroeconomic instability has a negative impact. Furthermore, there exists a significant positive relation between institutional change and economic development in Pakistan. The first section of the study provides an introduction, and section two provides relevant literature review. In section three methodology employed by the study is discussed. Section four presents results and discussion. Section five chalks out policy implications and concludes the study.

JEL Classification: O1; O10; O43; P35

Key Words: Institutional change; Economic development; Sustainable growth

1. Introduction

Institutions play a pivotal role in economic development. Institutional change is an important determinant of pattern and speed of development. Despite of this, institutions, institutional change and reforms are not an area which economists and researchers understand well. There exists discrepancy in theory of institutions and its implications. Understanding of institutions and institutional development remains to be an ongoing process even though their importance has been well established in literature. According to North, 1990 formal rules and informal norms, along with their enforcement mechanism are called institutions. Formal institutions are comprised of legal and judicial systems. Whereas, informal institutions include norms, culture, ethnic beliefs and so on. These are just as important as formal rules because they help shape the society and increase overall welfare, when used in a judicious manner. Effective institutions lead to increase in efficiency, transparency and competition in the interaction between private and public economic agents. This will in turn cause an increase in the levels of investment, savings, social capital, decrease in transaction cost and better management.

It is proven, time and again, that Pakistan is facing institutional decay, especially since 1990s. This has lead to increase in poverty, inequality and inefficiency in economic system as a whole. Many studies have shown that public investment either has insignificant or negative impact on economic growth of Pakistan. There is a pressing need for institutional development to ensure that public investment adds to productive capacity rather than being wasted.

Boettke and Fink (2011) critically reviewed the importance of institutions and institutional change. The study argues that institutions are far more important than policies. In other words developing strong institutions is more important than devising right public policies. For example, Institutions for securing private property rights are the key to sustain economic growth in developing countries. It is argued that governments in these countries are mostly corrupt, therefore, they should have as little interference in economic decision making as possible. The study does not discard importance of policies altogether rather focuses on the fact that because of predatory behaviour of government, policies fail to be effective. Resources are not utilized productively. It is easier to avoid private predation if property rights are enforced. But public predation is difficult to avoid. The insitutional change is required but it must come endogeneously. If it is brought about exogeneously via foreign interference or domestic policies, it will not last long. The reason is that institutional change is inherent in belief systems of society. Although this study makes some valid points it does not back them with empirical evidence. An important question to be asked is that to what extend private property right institutions will be able to steer resources towards productive activities. Furthermore, if policies are deemed ineffective then what factors can help in evolving the institutions of a country. It might take a long time and until then evils like poverty will continue to persist in developing countries.

In case of Pakistan an array of research support the view that institutional failure is a major cause of economic inefficiencies and ineffectiveness of policies. Table 1 shows Pakistan's ranks of various *World Governance Indicators*.

¹ (Kemal)

Table 1: Governance Indicators' Percentile Rank of Pakistan, 1996 & 2013

Percentile Rank*	1996	2013
Control of Corruption	8.8	17.7
Government Effectiveness	30.7	23.4
Political Stability and Absence of Violence/Terrorism	12.5	0.94
Regulatory Quality	30.9	24.8
Rule of law	28.7	20.8
Voice and Accountability	28.8	24.6

*0 corresponds to lowest rank and 100 to highest rank

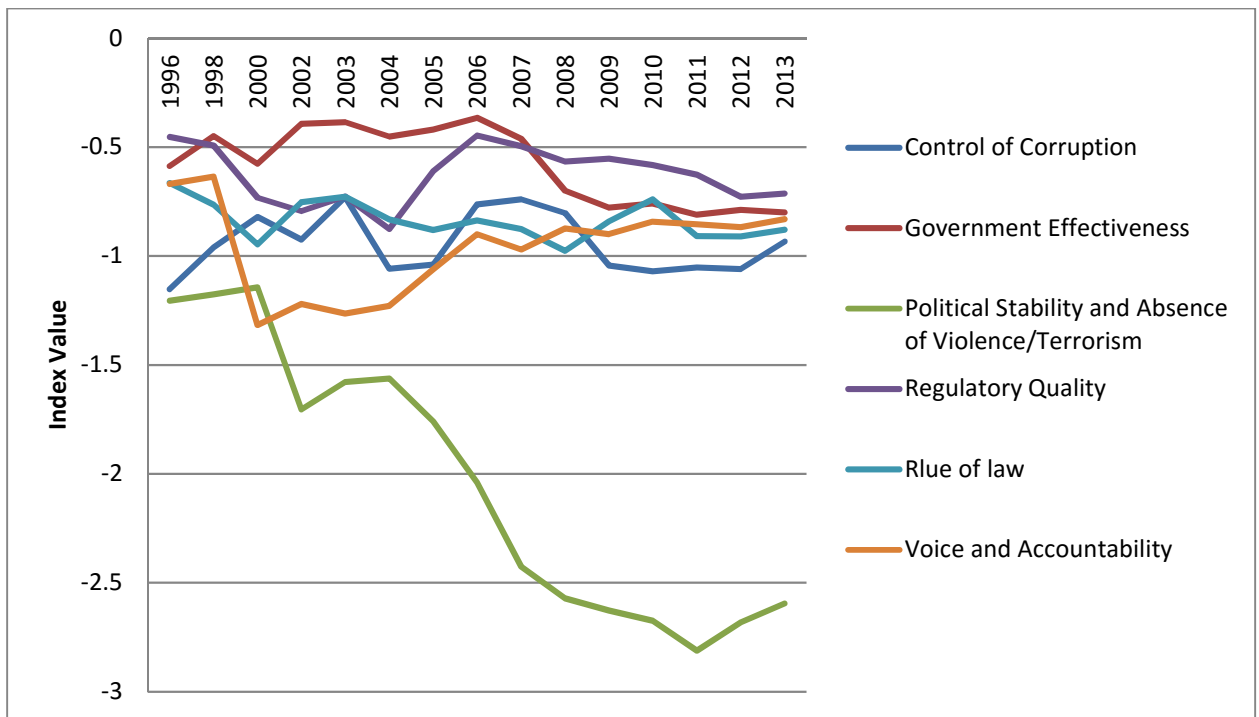
Source: World Development Indicators, Online Data Bank, Retrieved; April, 2015

Indicators presented in this table encompass legal, political and economic institutions. It shows that the country is among those where institutional quality is very low. It can be seen that for all indicators Pakistan's rank in the world is very low. Control of corruption is that only indicator for which Pakistan's rank has improved. For all other indicators Pakistan's rank in the world has further deteriorated from 1996 to 2013. In case of political stability and absence of violence/terrorism Pakistan is among countries at the very bottom. It has deteriorated from 12.5 in 1996 to only 0.9 in 2013. In country's current *institutional environment* there are two possible ways to tackle the issue of inefficient economic system. One option is to analyze the process of institutional change. And provide a framework to make institutions effective. Second option is to device policies which will work under existing institutions.² When institutional economists focus on first option they are assuming that institutions can be changed while ignoring the cost of implementing institutional reforms.

² (Chang)

Figure 1 shows various institutional quality indices for Pakistan from 1996 to 2013. It can be seen that for all indices values have decreased over time, indicating institutional deterioration. The worst situation is in case of Political stability and absence of violence/terrorism, as this index decreased from -1.2 to -2.5.³

Figure 1: Institutional Quality Indicators of Pakistan, 1996-2013



Source: World Development Indicators, Online Data Bank, Retrieved; April, 2015

The purpose of this study is to;

- Analyze process of institutional development and measure institutional change.
- Study the role of institutional development in economic performance of Pakistan.
- Chalk out relevant policy implications.

³ All indicators range from -2.5 to 2.5 (approximately). Positive values indicate better institutional quality while negative values indicate low quality institutions.

Study is organized as follows; section two provides relevant literature review. In section three methodology employed by the study is discussed. Section four presents results and discussion. Section five chalks out policy implications and concludes the study.

2. Literature Review

This section reviews existing literature on institutional change and its role in economic development in Pakistan as well as other countries. The purpose of this endeavor is to form guidelines for carrying out present research. Conceptualization of institutions, institutional change and their importance for economic development is not a new debate but it is an ongoing one. Hamilton (1919) claims that institutional approach to economics started when economists started focusing on *practical* problems related to *human well-being*. This study criticizes neo-classical approach to economics and highlights main characteristics of institutional economics which make it a better and more comprehensive approach to economic theory.

Hussain (2003) studies institutional structure of Pakistan. It analyzes role of institutions in economic growth. Study states that governance system in the country is *rent based*. Because of this Pakistan has failed to achieve sustainable economic growth. It provides a detailed analysis of institutions which has lead to low savings and investment, poverty, exploitation of resources by *elite* group, injustice and poor economic performance. It further argues that neoliberal view which states that markets are self regulatory and there is no need for intervention, except control of money supply, is unfound for. Thus there is need for structural reforms to sustain economic growth through

participatory development. The study is a contribution to existing literature on an important topic. But it fails to take social institutions under consideration. Furthermore, it does not provide the cost of institutional reforms. As pointed out by Chang, (2011) this is a common mistake which institutional economists make. They simply assume institutional change to be feasible, without providing insights about the process itself.

Ronald (2004) provides a conceptual framework related to institutional change. It compares fast-moving institutions and slow-moving institutions while focusing on their interaction with each other. Political institutions are considered fast-moving and social institutions are slow-moving. Legal system changes faster than social norms but slower than political institutions. Study points out that fast-moving institutions can influence slow moving institutions but these should also change continuously for consistent institutional change to occur. Culture and technology both can play an equal role in changing the institutions. It reinforces the importance of institutions for economic development. This study is a step forward in understanding institutional change but economic theory is still lacking in this regard as economists shy away from incorporating cultural norms and social values to debate of economic growth.

Azfar, (2006) provides insights about institutions which are required in order to make economic policy practicable. The study analyzes various layers of institutions. They are divided according to time period required to change them. Social institutions are slowest to change, while, private institutions change more quickly. Political and legal institutions lie inbetween these two. It concludes that institutions which lower transaction costs and secure property rights are important to bring changes in private sphere. Moreover, it is better to devise framework which suits current social realities as social

institutions may change centuries to change. The study is notable contribution to new institutional economics, which follow Williamson's (1999) hierarchy of institutions. Since it does not provide application of these theoretical propositions, hence, it is difficult to determine whether these can be implicated or not.

Ahrens & Mengerighaus (2006) analyzes role of market-enhancing governance institutions in China's economic success over the years. China is different from other transitional economies because it did not follow conventional economic reforms rather its own approach to reforms and decentralization of economy. This has lead to sustained economic growth. Even in the absence of fully protected private property rights, Chinese economy thrived by relying on innovation and experimentation in its institutional reforms. Gradually, country improved its governance structure and strengthened institutional enforcement. Although, the study strengthened view point of importance of institutions it does not provide any clear cut path to institutional change which other transitional economies can follow. Institutional change is a dynamic process and needs to be analyzed for every stage of development so that a coherent picture can be formenized. In spite of this China's experience does provides insights about institutional change and a main finding consitent in literature is that there are no hard and fast rules for institutional change, therefore, history and local environment should be considered while devising reforms (Cao).

Zakaria & Fida (2009) has analyzed the impact of political institutions on per capita income of Pakistan. Study uses time series data from 1947 to 2006 and employs methodology of Generalized Method of Moments (GMM) and sensitivity analysis. Literature provides varrying evidence; positive effect of democracy on growth, negative

effect and in some cases no effect. The focal point of this study is to provide time-series evidence, since almost all previous studies utilize cross-country analysis. Study uses traditional output growth model while incorporating variable of democracy as a control variable. Results shows that democracy has a negative impact of per capita growth rate. Study provides insights about an important ongoing debate but non-availability of many important variables (e.g. corruption, role of black market etc.) poses some doubt. Another drawback of the study is that it estimates a long-run growth model, taking democracy as a continuous variable rather than dichotomous.

Musole (2009) analyzes the importance of property right institutions, transaction costs and institutional change for the effectiveness of public policies. Public policies are not always able to achieve their well-intended goals. There are certain constraints that can lead to negative externalities as a result of policies which are not implemented efficiently. Thus, institutions matter more than policies. The focus of study are institutions related to transaction costs, especially property rights. For illustration it considers land transactions. It shows how rural land reforms can be implemented in a way that does not have negative impact on urban land markets. Results support the theory that public policy, transaction costs and property rights are interlinked. A framework is developed to study economic outcome of public policies. An important contribution of the study is providing a multidimensional model which can be modified for further research. However, the study is mostly qualitative rather than quantitative. It may be because concepts of transaction costs and property rights are not always easy to quantify.

Ahrens (2009) studies the importance of institutional change for policy reforms. It analyzes China and HPAs sustainable growth, focusing on institutional development in

these countries. Paper provides important implications related to good governance, institutions and successful implementation of economic reforms. Because economic, political and social institutions are interlinked, therefore, economic reforms do not bring expected results in many developing countries. There is need for institutional change which will lead to good governance and effective policy implementations. Study identifies four pillars of good governance; protection of property rights, prevention of corruption and rent seeking behavior, creating technical and administrative skills and establishment of principal economic institutions for market exchange. This study can be improved further by analyzing some cases of failed institutional transition and comparing them with China and HPAEs. This can lead to better understanding of why some institutions fail in some countries whereas they succeed in others.

Khawaja & Khan (2009) reviews theories of institutional economics, historical experiences of various countries and implications for bringing institutional Change in Pakistan. Study has analyzed some countries which experienced institutional change while others which did not experience such changes even under same circumstances. In Pakistan rent seeking behavior exists this UK and Netherland's experience will not apply. Fiscal constraints and strategic interests of foreign powers also failed to bring about institutional change in the country. Revolutions seems unlikely as well. Study concludes that there is a need for gradual approach making education a key factor. It argues that it is easier to bring institutional change in a homogenous society by changing their belief system. controlling education of masses upto a certain level will help this cause. In short institutional reforms should begin from education system in Pakistan. In light of given arguments it seems effective to begin institutional change from changing education

system but, according to hierarchy theory of institutions, social institutions may take centuries to change. Changes in education system can very well fail to cause expected change in belief system of society. Economic institutions can be changed in only few years. It goes without arguing that institutions which are easiest to change will have an impact on other institutions as they are all interlinked. Thus economic reforms should be the focal point of policy makers rather than social change.

Empirical researches show institutional failure as a cause of economic inefficiencies and ineffectiveness of policies. There is the question of causality from economic development to institutional change. Existing literature on institutional change is woefully lacking. Most of the studies have focused on single or few dimensions of the phenomenon. There is no clear path that will lead to such changes and these implications must be kept in mind while analyzing role of institutional development on economic performance. Moreover institutional change is a multidimensional phenomenon. Hence it should be measured in a composite manner rather than focusing on single (or few) sub-dimensions.

3. Methodology and Data

In this section methodology and data are discussed. First it provides theoretical background. Afterwards methodology employed by this study is developed. Results obtained after carrying out the study are discussed in the next section.

3.1. Theoretical Background

Historians have always understood the importance of institutional change in evolution of political, social and economic framework within which a society operates.

Historians, however, base their deductions on logic rather than well developed theories or mathematics. In recent years economists have also started to realize that institutional change is the determining factor behind pattern and speed of development. According to North (1990) competition is the key to institutional change. It forces organizations and economic agents to continuously invest in knowledge and innovate. It is a dynamic multidimensional process. Institutional framework will lead to determination of the kind of knowledge which has maximum pay-off. Feedback of information and externalities caused by institutional matrix make this process path dependent.⁴

There are various theories which try to conceptualize institutional change. Some consider it exogenous while others view it as endogenous to growth process. Similarly, some economists believe that institutional change can be influenced by reforms, political processes and deliberate change in rules and laws. Whereas, there are many others who hold the view that institutional change is a result of evolutionary process. Yet, some economists believe it to be a combination of both evolutionary and deliberately designed process. Despite varying views on the process of institutional change, there is consensus about its being a dynamic multidimensional phenomenon. It encompasses political, legal, social and economic transition. Furthermore, it is believed that all these dimensions are interlinked with each other. This makes institutional change hard to measure. There is no single measure which can adequately explain this process. The work related to measurement of institutional change is limited.

⁴ (North)

Theory suggests that institutional change is caused by a set of exogenous variables and it then influences economic outcomes.⁵ Moreover, institutional change is an unobservable indicator which is affected by various observable indicators. These indicators include measurements of political change, social evolution, changes in legal system, economic system and interaction between all these. Literature shows that social institutions take centuries to change. These are embedded into culture, religion and regional norms and values. Political institutions can be changed overnight. Similarly, legal and economic institutions can also be changed in relatively short time periods. Once institutional change occurs it influences economic development of a country. It can lead to innovation, technological changes, competition, transparency and sustained economic growth.

3.2. Multiple Indicators Multiple Causes (MIMIC) Model

The model used in this study incorporates all dimensions of institutional change rather than focusing on single sub-dimension. MIMIC approach is used for this purpose. It is a special case of simultaneous equation model which accounts for unobserved components. Study follows Raiser *et al.* (2001) with some improvements, that is extending time series, and including additional variables. Moreover, it is a time-series rather than cross-country analysis. It uses a structural model of institutional change where institutional change is taken as an unobservable latent variable which depends on various observable exogenous and endogenous variables. Present study is conducted for Pakistan, taking data from 1996-2013.⁶ In addition to this study uses a different set of variables to

⁵ (Raiser, Tommaso and Weeks)

⁶ Years are chosen on the basis of availability of data on institutional quality and related indicators.

measure institutional change, as well as, other related variables. The reason behind this is that Pakistan is a developing country and it is different from transitional economies in many ways. Financial and legal institutions are not well developed in Pakistan and social and cultural matrix also makes it unique.⁷ Model can be summarized in following equations;⁸

$$y_i = \tau_i^y y^* + \varepsilon_i \quad (1)$$

$$y^* = \alpha_1 x_1 + \alpha_2 x_2 + \dots + \alpha_j x_j + \beta_t + \varphi \quad (2)$$

$$y = \pi x + v \quad (3)$$

Where; y_k is an independent measure of institutional change, ($k = 1, \dots, m$) and each y_k is denoted by y^* , β represent initial conditions factor, x_j represents a set of exogenous variables which cause institutional change and x is a vector of these observable exogenous variables. Because institutional change cannot be directly measures, hence it is not possible to estimate equation (1) and (2). Both equations are combined and solved for reduce form to obtain equation (3).⁹ Estimates of equations (1) and (2) can be obtained using dynamic MIMIC model for institutional change.

3.3. Specification of Indicators and Data

In this section indicators used to estimate dynamic MIMIC model are discussed in detail. It also states data sources used in this study. The specified model is comprised of unobservable institutional change latent variable, observable exogenous variables which

⁷ This is because institutions are path dependent hence history, geography and culture matter.

⁸ For more details and derivation of the model see Raiser *et al.* (2001).

⁹ Parameters and coefficients in equations (1) and (3) are vectors.

cause institutional change and observable endogenous variables which also influence institutional change. As institutional change is an unobservable indicator it can be measured by a *common factor* of variables which cause it.

Institutions are path dependent. There are initial factors which may influence institutional change in a country. In this study three such factors are considered, geographical, cultural and legacy of political institutions. Study uses natural resources endowments and proximity to modern democratic countries as proxy for initial geographical conditions. Former is expected to have a negative impact of institutional change as greater natural resources rent removes incentive for institutional reforms. Later is expected to positively impact institutional change as close proximity to modern democratic society can facilitate institutional reforms in a country. These are expected to cause institutional changes. To represent cultural heritage study uses dummy for religion and ethnic identity. As a measure of political institutions legacy, study utilizes a variable of number of years that country spent under democracy and a dummy for national sovereignty. Percentage of population living in urban areas and expenditure in research and development are also included as initial conditions for institutional change.

Indicators which can cause institutional changes are extent of privatization, liberalization, trade orientation, political rights, capacity of state, and macroeconomic stability. Some of these are taken as exogenous while others as endogenous. Some are continuous variables while others are ordinal.

To identify unobservable institutional change variable, study uses six governance indicators. Data is taken from World Bank's online database. These include, control of

corruption, government effectiveness, political stability and absence of violence/terrorism, rule of law and voice and accountability indicators. Rationale behind using these indicators is that if they represent institutional quality then these variables must measure a common underlying factor. This can be seen as a type of factor analysis. Study tries to identify said factor.

4. Results and Discussion

The data comprises World Development Indicators, World Governance Indicators and World Freedom Indicators, data sources include World Bank database and Freedom House database. Data cover time period of 1996 to 2013. List of variables is provided in table 2.

To identify cause of institutional change and study key relationships between ordinal variables, correlation matrices are constructed and results are provided in table 3. Part (A) shows correlation between governance indicators. It can be seen that government effectiveness highly correlates with political stability and absence of violence/terrorism. Regulatory quality is highly correlated with voice accountability. Similarly voice accountability and corruption are correlated with government effectiveness. In part (B) correlation between initial conditions and institutions is given. It can be seen that most of these variables show significant correlation, thus, proving that institutions are path dependent. Part (C) shows correlation between institutions and structural variables. Again, we see that most of these variables are associated with each other.

It can be seen that government effectiveness is negatively correlated with budget deficit. There is high positive correlation between exports and political institutions.

Political stability is highly and positively correlated with indicators of freedom and accountability. Extend of privatization is positively correlated with institutional indicators and negatively with budget deficit.

Table 2: List of Indicators Used to Estimate MIMIC Model

Initial Factors	Measurement Indicators	Structural Indicators
GDP Per Capita Growth Rate (GCP)	Control of Corruption (CC)	Macroeconomic stability (inflation (In) and budget deficit (BD) as % of GDP)
Wealth in Natural Resources (NRE)	Government Effectiveness (GE)	Average of Civil liberties Index and Political liberties Index (ACP)
Share of the Population Living in Urban Areas (UrP)	Political Stability and Absence of Violence/Terrorism (PSAV)	Exports as % of GDP (Ex)
Dummy for political legacy (DPS) (1 if democratic gov. and 0 if military rule)	Regulatory Quality (RQ)	Government Expenditure as percentage of GDP (GovE)
R&D Expenditures (RDE)	Rule of law (RL)	Extent of Privatization (Domestic Credit to Private Sector as % of GDP) (DC)
Ethnic heterogeneity (DE)= 2 if > 95% pop. Belong to dominating ethnicity, 1 if <95% but >75% pop. Belong to dominating ethnicity, 0 if <75% pop. Belong to dominating ethnicity	Voice and Accountability (VA)	Extent of Liberalization (exports value index) (ExV)
Religion (DR) = 1 if >95% pop. Have dominating religion, 0 otherwise		

Source: Self Constructed

This result is as expected because we have considered availability of credit to private sector as its indicators. Exports and government expenditures are negatively

correlated, this is opposite of transition economies.¹⁰ Furthermore, indicators of macroeconomic stability are negatively correlated with indicators of freedom and voice accountability. As mostly variables are highly correlated with each other, hence, it can be deduced that they share same underlying factors and can be used for MIMIC estimation.

Parameters of measurement and structural equations of MIMIC model are given in table 4. Stata output and goodness of fit tests are presented in table 1 and 2 of Appendix. All variables are significant and model is a good fit. Measurement equation shows that control of corruption, government effectiveness and political stability and absences of violence/terrorism are significantly influenced by institutional change. On the other hand regulatory quality, rule of law and voice accountability have a significant impact on institutional change in Pakistan. Control of corruption, rule of law and voice accountability has greatest impact on institutional change in Pakistan.

Structural parameters are also significant. It can be seen that privatization and liberalization have a positive impact of institutional change. Macroeconomic instability has a negative impact, but budget deficit has a positive impact on institutional change. The reason behind this may be that greater budget deficit provides more incentive for institutional reforms. Exports value has a positive impact on institutional change this support theory that trade orientation facilitates institutional changes in an economy. In this model average of civil liberties and political liberties (ACP) and initial condition scores are constrained variables. Restrictions can be introduced to deal with this issue.

¹⁰ Raiser, *et al.* (2001)

Table 3: Correlation Matrices**(A)**

	CC	GE	PSAV	RQ	RL	VA
CC	1.0000					
GE	0.4428	1.0000				
PSAV	0.0689	0.6972	1.0000			
RQ	0.0651	0.0017	-0.0820	1.0000		
RL	-0.2621	0.3468	0.4310	0.1606	1.0000	
VA	-0.3883	-0.4332	-0.2979	0.7128	0.1555	1.0000

(B)

	CC	GE	PSAV	RQ	RL	VA	NRE	UrP
CC	1.0000							
GE	0.2306	1.0000						
PSAV	-0.1989	0.5324	1.0000					
RQ	0.0919	0.0153	-0.1229	1.0000				
RL	-0.8076	0.0577	0.2155	0.4025	1.0000			
VA	-0.2932	-0.0874	-0.1114	0.8533	0.6167	1.0000		
NRE	0.5698	-0.1264	-0.7055	-0.1487	-0.6708	-0.3044	1.0000	
UrP	0.2565	-0.4251	-0.9568	-0.1033	-0.3166	-0.1309	0.7255	1.0000
DPS1	-0.6972	-0.2794	0.1164	0.4907	0.8393	0.7482	-0.7401	-0.2667
RDE	0.4485	0.2307	-0.6318	-0.0317	-0.3370	-0.2048	0.8441	0.6962
DR	.	.	.	.	.	.	.	.
	DPS1	RDE	DR					
DPS1	1.0000							
RDE	-0.6169	1.0000						
DR	.	.	.					

(C)

	CC	GE	PSAV	RQ	VA	In	BD	ACP
CC	1.0000							
GE	0.4428	1.0000						
PSAV	0.0689	0.6972	1.0000					
RQ	0.0651	0.0017	-0.0820	1.0000				
VA	-0.3883	-0.4332	-0.2979	0.7128	1.0000			
In	-0.2749	-0.6235	-0.6109	0.3866	0.5121	1.0000		
BD	-0.2908	-0.6955	-0.4081	0.3774	0.7260	0.5903	1.0000	
ACP	0.2996	0.7969	0.8299	0.2178	-0.1243	-0.3397	-0.2926	1.0000
Ex	-0.1334	0.6606	0.7749	-0.0187	-0.0897	-0.5242	-0.3943	0.6757
GovE	-0.2793	-0.3884	-0.1194	0.6352	0.8630	0.2816	0.6596	-0.0543
ExV	-0.1393	-0.7202	-0.9326	0.0019	0.3237	0.5402	0.4665	-0.8274
DC	0.3026	0.6711	0.4064	0.2784	-0.1840	0.0867	-0.4283	0.7214
	Ex	GovE	ExV	DC				
Ex	1.0000							
GovE	-0.0417	1.0000						
ExV	-0.6897	0.1164	1.0000					
DC	0.3412	-0.2998	-0.4839	1.0000				

Table 4: MIMIC Model of Institutional Change: Parameters Estimates

Structural Equation		Measurement Equation	
	α		
In	-0.3926284	CC	0.966436
BD	0.2407682	GE	0.490961
ACP	0 (constrained)	PSAV	-0.43576
Ex	-0.3220035	RQ	0.216434
GovE	-0.1062656	RL	-0.92734
ExV	0.6775871	VA	-0.58631
DC	0.1756636		
InCon	0 (constrained)		

Source: Calculated by the author

5. Conclusion and Policy Implications

It is well-established that institutions play an important role in economic development. Institutional change is a continuous process and it is vital for sustainable

economic growth. In this study an attempt has been made to develop a multiple indicators and multiple causes model to study institutional change and development relationship. There are theoretical discrepancies related to institutional change. Some economists believe that it is exogenous while others support point of view that it is endogenous. However, it is a multidimensional phenomenon. There is no unique measure which can represent institutional change perfectly. Furthermore, it is also not clear whether economic development cause institutional change or vice versa. In this situation MIMIC model is considered an appropriate technique of estimation. As it is a multiple causes model therefore model does not need to be unidirectional. In addition to this it does not pose usual time series restriction on data and variables included can be ordinal or continuous.

Results show that all variables included in the model are significant. There exists causal association between latent variable and measurement indicators. Control of corruption, rule of law and voice accountability seems to be most important in causing institutional change. Policies should focus on these dimensions. Control of corruption will also reduce government expenditure which is positively associated with institutional change. It can be seen that privatization (measured as availability of domestic credit for private sector) has a positive impact on institutional change. This implies that there is need for domestic resource mobilization in order to increase the availability of credit for private sector. Macroeconomic stability is important, therefore, there is need to control inflation in the country.

The results of this study should be used cautiously. Longer time series may improve these results but because of unavailability of institutional data it remains a task

for future. Lastly, it should be kept in mind that institutional change is taken as a latent variable hence exact measure remains elusive.

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Appendix

Table 1: Stata Output: MIMIC Model

	EIM						
Standardized	Coef.	Std. Err.	z	P> z	[95% Conf. Interval]		
Structural							
L1 <-							
In	-.3926284	.0090714	-43.28	0.000	-.4104081	-.3748487	
BD	.2407682	.0055628	43.28	0.000	.2298653	.2516711	
Ex	-.3220035	.0074397	-43.28	0.000	-.336585	-.3074219	
GovE	-.1062656	.0024552	-43.28	0.000	-.1110778	-.1014535	
ExV	.6775871	.0156553	43.28	0.000	.6469033	.7082708	
DC	.1756636	.0040586	43.28	0.000	.1677089	.1836183	
factor1	0 (constrained)						
ACP	0 (constrained)						
Measurement							
CC <-							
L1	.9664357	.0014738	655.76	0.000	.9635472	.9693242	
_cons	-2.685038	.0579417	-46.34	0.000	-2.798602	-2.571475	
GE <-							
L1	.4909609	.0086091	57.03	0.000	.4740874	.5078345	
_cons	-3.72953	.0207703	-179.56	0.000	-3.770239	-3.688821	
PSAV <-							
L1	-.4357585	.0081562	-53.43	0.000	-.4517443	-.4197726	
_cons	-2.622502	.0115054	-227.94	0.000	-2.645052	-2.599952	
RQ <-							
L1	.2164341	.0047663	45.41	0.000	.2070922	.2257759	
_cons	-3.951165	.0042763	-923.96	0.000	-3.959546	-3.942783	
RL <-							
L1	-.9273406	.0030004	-309.07	0.000	-.9332213	-.9214598	
_cons	-3.809604	.0756926	-50.33	0.000	-3.957959	-3.661249	
VA <-							
L1	-.5863121	.0088897	-65.95	0.000	-.6037355	-.5688887	
_cons	-3.194462	.0253717	-125.91	0.000	-3.24419	-3.144734	
Variance							
e.CC	.066002	.0028486			.0606485	.071828	
e.GE	.7589574	.0084535			.7425684	.7757081	
e.PSAV	.8101146	.0071083			.7963018	.824167	
e.RQ	.9531563	.0020632			.9491211	.9572087	
e.RL	.1400395	.0055649			.1295465	.1513824	
e.VA	.6562381	.0104242			.6361218	.6769906	
e.L1	.4488881	.0207426			.41002	.4914407	
Covariance							
In							
BD	.6146691	.	.	.	.	.
Ex							
ExV	-.7001201	.1058935	-6.61	0.000	-.9076676	-.4925726	
GovE							
DC	-.2110329	.	.	.	.	.
Discr. test of model vs. saturated: chi2(77) = 0.00, Prob > chi2 = 1.0000							

Table 2: Goodness of Fit Tests

Fit statistic	Value	Description
Discrepancy		
chi2_ms(61)	2.625	model vs. saturated
p > chi2	1.000	
chi2_bs(51)	32.077	baseline vs. saturated
p > chi2	0.982	
Population error		
RMSEA	0.000	Root mean squared error of approximation
90% CI, lower bound	0.000	
upper bound	.	
pclose	1.000	Probability RMSEA <= 0.05
Baseline comparison		
CFI	.	Comparative fit index
TLI	-1.579	Tucker-Lewis index
Size of residuals		
SRMR	0.513	Standardized root mean squared residual
CD	0.394	Coefficient of determination